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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,624	02/23/2004	Lawrence Shungwei Mok	YOR920030206US1	8420
7590 Thomas A Beck 6136 West Kimberly Way Glenn Dale, AZ 85308			EXAMINER DUONG, THO V	
			ART UNIT 3744	PAPER NUMBER
			MAIL DATE 06/27/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/784,624

**Applicant(s)**

MOK, LAWRENCE SHUNGWEI

**Examiner**

Tho v. Duong

**Art Unit**

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 March 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.  
4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 23 February 2004 and 27 February 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicant's amendment filed 3/7/08 is acknowledged. Claims 1-9 are pending. Claims 7-9 remain withdrawn from further consideration.

The indicated allowability of claims 1-6 are withdrawn in view of the newly discovered reference(s) to Lee (US 6,008,989); Bradt (US 5,909,358) and Lin (US 6,188,578). Rejections based on the newly cited reference(s) follow.

#### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The claimed subject matter of "said sheets are in a thickness range from 0.01 to 5 micrometers" is not described in the specification. On page 4, applicant discloses that the thickness range from 0.01 to 5 millimeters..

Appropriate correction is required.

#### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed subject matter of "said finger portion of said edge of said support fin member in contact with and secured to each side wall of said beam member" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Applicant does not disclose in figure 1 that the finger portion (14) at the edge secured to the side wall of the beam member.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 3, the claimed subject matter of "wherein said sheets are in a thickness range from 0.01 to 5 micrometer" renders the scope of the claim indefinite since applicant discloses in the specification this range is 0.01 to 5 mm.

Claim 1 recites the limitation "said fin member" in lines 6,7,12. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the interface" in lines 2 and 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 is further rejected as can be best understood by the examiner in which the unit is mm.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al. (US 6,008,989). Lee discloses (figure 5) a heat dissipating device comprising a CPU module (70) mounted on a PCP; at least two support fin members (50) having been formed from a single sheet and folded into a substantially inverse U-shape, each fin member (50) having two side arms (52), each the side arm having an inside surface and an outside surface and an edge, each the edge having a finger portion (53); at least two parallel beam members (18) made from heat conductive material, each beam member having top, bottom and side walls, the side walls being positioned between the inside surface of the side arms; the finger portion of the edge of the fin member in contact and secured to the side wall of the beam member; the finger portion (53) of the edge being folded and extending below the bottom wall of the beam member and is in a bent position to form a contact support structure which is a compliant interface; the beam

members being positioned in thermal contact with the heat source; the side arm being thinner than the beam members (18); and there being a thermally conductive material (74 positioned between the bottom wall of the beam member and the finger portion of the edge extending below the bottom wall of the beam member is in bent position.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Bradt (US 5,909,358). Lee substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the support fin member is made of aluminum or copper or graphite fiber composite sheet with thickness in a range of 0.01 to 5 mm. Bradt discloses (figure 4 and column 4, lines 63-68) a fin support member (38) that is made of resilient material sheet such as metal including copper bronze or any other equivalent metallic material that is 0.03 inches thick for a purpose of obtaining a springy fin support member and providing additional heat transfers path from the heat source to the heat sink. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Bradt's teaching in Lee's device for a purpose of a compliant fin support member and providing additional heat transfers path from the heat source to the heat sink.

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Bradt as applied to claim 1 and 3 above, and further in view of Lin et al. (US 6,188,578).

Lee and Bradt substantially disclose all of applicant's claimed invention as discussed above except for the limitation that there is a soldering or resilient or grease disposed between the fin support member and the beam member. Lin discloses (figure 1 and column 3, lines 19-60) that a thermal grease or soldering material (15,17) is disposed as a thermal interface between two heat exchanger surfaces such as fingers (132) and body (11) or heat source (12) for a purpose of providing an efficient heat transfer paths between two heat exchanger surfaces. Regarding the method of forming the device "soldering, welding, brazing or gluing" is not germane to the issue of patentability of the device itself. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee et al. (US 5,959,350) discloses a fixing device for securing a heat sink to a CPU module.

Clemens et al. (US 6,082,440) discloses a heat dissipation device.

Hatauchi et al. (US 5,548,482) discloses a clamped heat sink.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tyler J. Cheryl can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tho v Duong/  
Primary Examiner, Art Unit 3744